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ABSTRACT

The Prevocational Assessment Screen (PAS) is designed to provide instructors or evaluators with a quick (50 minutes to score and administer) and simple (requiring no training to administer) method of screening mildly handicapped and disadvantaged youth between 14 and 21 years of age for job training and placement. PAS contains eight samples which screen for the following job and training aptitudes: Alphabetizing (verbal clerical perception); Etch-A-Sketch Maze (motor coordination); Calculating (numerical clerical perception); Small Parts (finger dexterity); Pipe Assembly (manual dexterity); O-Rings (form perception); Block Design (spatial perception); and Color Sort (color perception). This manual provides instructions for administration and evaluation of each of the samples. Guidelines and forms for reporting procedures and intake are included. A chart for correlating PAS aptitudes to job characteristics listed in the Dictionary of Occupational Titles and to specific vocational programs is provided. Appendices provide technical information about the PAS (test reliability, norms, validity), a list of parts needed for the screening tests, and documentation for computerized scoring and performance matrix. (CB)

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EVALUATOR'S MANUAL

P.A.S.

Prevocational Assessment Screen

PINEY MOUNTAIN PRESS, INC.

PREVOCATIONAL ASSESSMENT SCREEN

Produced by Piney Mountain Press, Inc.

Written by Michele Rosinek

Illustrated by Sandra Rees

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Etch-A-Sketch is a Trademark of The Ohio Art Company

INTRODUCTION

The Prevocational Assessment Screen, PAS, is designed to provide an instructor or evaluator with a quick and simple method of screening individuals for training and for job placement. Developed by special needs evaluators and educators, PAS accommodates the problem of assessing large numbers of students in a short period of time in informal, nonstructured settings.

PAS can be run on several evaluees at the same time and takes less than 50 minutes to administer and score. Compact and highly mobile, PAS approximates the size of a large tool box and is entirely self-contained. There are no consumable pieces for repurchase. No training is required so that administration may begin immediately and new evaluators or instructors do not have to sacrifice valuable testing time while waiting on an inservice. PAS is normed on handicapped, average vocational students and employed workers (MTM-1).

DEVELOPMENT

The Prevocational Assessment Screen, PAS, was produced by Piney Mountain Press, Inc. and written by Michele Rosinek, a consultant to the Mildly Handicapped Program for the Georgia State Department of Education. A steering committee consisting of handicapped, disadvantaged and instructional specialists participated in the general development, piloting and norming of the assessment.

PAS is designed primarily for use with mildly handicapped and disadvantaged youth between 14 and 21 years of age. However, it is also useful for regular and adult populations.

The system is correlated to the DICTIONARY OF OCCUPATIONAL TITLES and also ties into specific vocational training programs within an institution.

ORGANIZATION

PAS contains eight samples which screen for the following job and training aptitudes:

1. Alphabetizing: Verbal Clerical Perception.
2. Etch-A-Sketch Maze: Motor Coordination.
3. Calculating Numbers: Numerical Clerical Perception.
4. Small Parts: Finger Dexterity.
5. Pipe Assembly: Manual Dexterity.
6. O-Rings: Form Perception
7. Block Design: Spatial Perception.
8. Color Sort: Color Perception.

Each sample is independent and may be administered in any order over any time period required.

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The manual details administrative techniques and reporting procedures.

PHYSICAL DESIGN

Each of the eight samples stand alone in that they require no other tools or equipment other than what is already provided. The entire assessment is stored in a convenient tool box sized carrying case and can be easily moved from one location to another. The samples are durable and nonconsumable. Reproducible masters are provided for all duplication purposes. Replacement components may be obtained locally or supplied through the publisher.

THE ASSESSMENT PROCESS

PAS is intended as a screening tool to provide quick identification of strengths and weaknesses in an evaluee's motor and perceptual performances. PAS assumes that other criteria relevant to an evaluee's placement such as general educational development, working conditions, physical demands, training time, temperaments and interests is already available through records, counseling or additional testing devices.

ADMINISTRATION

The purpose, materials required, and general instructions are included with each sample. Instructions are provided orally, by demonstration and by allowing for practice. All the samples allow for a separate practice and performance period where appropriate.

SCORING

Time and error are given equal weight in the scoring process. Timing begins after instructions are given and the evaluee has successfully completed the practice portion. Evaluee works to completion or until lowest percentile ranking is reached. The time and error scores can be computer generated or hand scored on-site. Scoring aids are included with the samples.

All scores are reported as percentiles which can be converted to a 1-5 rating.

READMINISTRATION

An evaluee may be allowed to practice on the individual samples to determine if he or she can come close to the MTM time. See Technical Data in Appendix for more details.

NORMS, RELIABILITY & VALIDITY

See Technical Data in Appendix, page 26.

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REPORTING

Reporting forms are included for recording times, scores, percentiles and ratings on the motor and perceptual samples. In addition, an Intake Form is provided for entering additional criteria such as general educational development, working conditions, physical demands, training time, temperaments and interests.

A performance profile allows for a graphic representation of results and a vocational training/performance matrix enables an evaluator to relate scores to specific training programs. A computer program is included to aid the evaluator in obtaining scores, profiles and training correlations.

Finally a correlation is provided to nonsupervisory occupational work groups of the GUIDE FOR OCCUPATIONAL EXPLORATION found in the SELECTED CHARACTERISTICS OF OCCUPATIONS DEFINED IN THE DOT.

TRAINING

No training is required, however, it is available if requested. Technical assistance is available after purchase through the publisher.

ADD-ONS

Additional instruments may be purchased to enhance the assessment process and provide for a more in-depth evaluation.

1. The LOCAL NORM DEVELOPMENT SYSTEM is a computer program for Apple computers designed to help a system generate a local norm. Simply type in scores and the program will calculate and print out a mean, standard deviation and percentile.. 195.00

2. SAM (SKILLS ASSESSMENT MODULE) is designed to assess an individual's vocational competencies as they relate to performances required in vocational training programs. Aptitudes, learning styles, work behaviors and cognitive abilities are all considered in the assessment process. The unit contains separate norms on handicapped, disadvantaged , average students and employed workers.....1695.00

3. VOCATIONAL I.E.P. is a computer program designed to help special needs instructors generate vocational I.E.P.'s on their students.....195.00

4. VOC-TIES (VOCATIONAL TRAINING INVENTORY & EXPLORATION SURVEY) is a picture interest survey which includes slides, tape, script and scoring forms.....325.00

DEFINITION OF TERMS

I. APTITUDES

A. Clerical Perception - Ability to perceive pertinent detail in verbal or tabular material. Ability to observe differences in copy, to proofread words and numbers and to avoid perceptual errors in arithmetic computation.

B. Color Discrimination - Perceiving similarities or differences in color or shades.

C. Finger Dexterity - Ability to move the fingers, and manipulate small objects with the fingers, rapidly or accurately.

D. Form Perception - Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures.

E. Manual Dexterity - Ability to move the hands easily and skillfully. Ability to work with the hands in placing and turning motions.

F. Motor Coordination - Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and swiftly.

G. Spatial Aptitude - Ability to think visually of geometric forms and to comprehend the two-dimensional representation of three-dimensional objects.

II. RELATED VOCATIONAL CRITERIA

A. Academic preferences: Expressed evaluee preference or record showing interest in one or more of the following categories:

1. Language/English
2. Mathematics
3. Sciences Detail
4. Social Studies
5. Physical Ed/Health
6. Art
7. Industrial Arts
8. Home Economics
9. Agriculture
10. Distributive Ed
11. Office
12. Technical/Industrial

B. Learning Abilities: Identifies evaluee capability through tests and records concerning:

1. General Learning Ability
2. Verbal Ability
3. Numerical Ability

C. Physical abilities and preference: Expressed and demonstrated evaluee abilities and preferences concerning the following factors:

1. Strength - What could you do regularly?
   0-2 lbs. 10-20 lbs. 25-50 lbs. 50-100 lbs.
2. Climbing, balancing
3. Stooping, kneeling, crouching, crawling
4. Talking/hearing
5. Seeing

D. Specific Vocational Preparation: Expressed training time available to or preferred by evaluee:

1. Short demonstration
2. Up to 30 days
3. 30 days - 3 months
4. 6 months - 1 year
5. 1 year - 2 years

E. Temperaments: Temperaments are synonymous with the individual's "personal traits." This area includes the following different types of situations to which workers must adjust.

1. Adaptability to accepting responsibility for the direction, control, or planning of an activity.
2. Adaptability to situations involving the interpretations of feelings, ideas, or facts in terms of personal viewpoints.
3. Adaptability to influencing people in their opinions, attitude or judgements.
4. Adaptability to making generalizations, evaluations or decisions based on measurable criteria.
5. Adaptability to dealing with people beyond giving and receiving instructions.
6. Adaptability to performing repetitive work or to performing continuously the same work according to set procedures or guidelines.
7. Adaptability to performing under stress when confronted with a critical, unusual or dangerous situation.
8. Adaptability to situations requiring precise attainment of set limits, tolerances or standards.
9. Adaptability to performing a variety of duties, often changing from one task to another, without loss of efficiency or composure.

F. Types of work preferred: Expressed evaluee interest in one or more of the following categories.

1. Artistic
2. Business Detail
3. Humanitarian
4. Industrial
5. Leadership
6. Mechanical
7. Nature
8. Physical Feats
9. Protective
10. Scientific
11. Selling
12. Services

G. Work activities preferred: Expressed evaluee preference in dealing with:

1. Data
2. People
3. Things

H. Work conditions preferred: Defined by preference or ability to work under following conditions:

1. Inside
2. Extreme cold
3. Wet or humid
4. Hazards
5. Outside
6. Extreme heat
7. Noise or vibrations
8. Atmospheric conditions

ADMINISTRATIVE GUIDELINES

1. Administer modules in a well-lighted room on a flat, light-colored surface. Evaluees should be arranged to prevent direct observation of others before and during testing.

2. The modules may be administered in any order, in one sitting in as many as the evaluator may require.

3. The evaluee should be given orientation regarding the scope and purpose of the testing and what is expected of him/her as a worker in the setting. Always stress that speed and accuracy are equally important factors in determining their score. So, they must work as fast as they can making as few errors as possible.

4. Directions are given orally and by demonstration. Always allow for practice where indicated and make sure evaluee acquires the required skills and concepts needed to perform the task before testing.

5. Begin the Activity when the evaluee understands what to do. At this point you measure time and check for errors. No assistance may be given during this performance phase. If a piece is dropped on the floor, tell evaluee to continue working. Pick up dropped piece and place back with the sample. If evaluee does take time out in retrieving a dropped piece, consider retesting or deducting for lost time.

6. Use scoring aids and follow special scoring instructions indicated on the individual instruction sheets and diagrams. The evaluee is scored one point for each error.

7. After the initial administration of all the samples, the evaluee may be allowed to practice on specific samples to determine if he or she can score close to the MTM time. Simply readminister sample in the same manner as indicated on individual instruction sheets and keep a record of how many practice trials it takes to reach a competitive time. An MTM time assumes the activity is completed without any errors.

SAMPLE 1

ALPHABETIZING

PURPOSE: The objective of this sample is to screen for clerical verbal aptitude via the evaluee's ability to sort pre-addressed postcards alphabetically.

MATERIALS: 50 Pre-addressed postcards
1 Card File
1 Set of alphabetical dividers

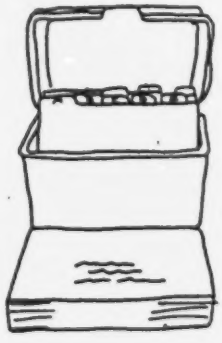
ACTIVITY: Given a stack of 50 postcards, a file box and a set of dividers, the evaluee will alphabetically arrange the cards in the file box. Before beginning the timed portion of this activity, the evaluee will be allowed a practice trial, ordering the first five cards of the stack. The cards should be placed behind the divider corresponding with the first letter of the person's last name indicated on the card. The evaluee should not alphabetize cards falling behind the same divider. In the starting position the evaluee's hands should be in a "rest" position. The index cards in file should be tilted to the rear.
(MAXIMUM TIME ALLOWED: 10 MIN.)

VERBAL CUE: Say: "Place the first five cards behind the dividers in the file box by matching the first letter of the person's last name with the letter on the divider." (Check evaluee's procedure and correct if necessary.) Then say: "File the remainder of the cards using any method of handling the cards which you feel is the most productive."

INTERPRETATION: Clerical Verbal-Ability: To perceive pertinent detail in verbal material. Ability to observe differences in copy and to proofread words. A measure of speed of perception which is required in many industrial jobs even when the job does not have verbal or numerical content.

SCORING: An error is scored each time a student places a card behind the wrong divider. Check markings on bottom of cards for incorrect placement.

Starting Position



Correct Sequence

Incorrect Sequence

Error Error

Scoring Procedure

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SAMPLE 2

ETCH-A-SKETCH MAZE

PURPOSE: The objective of the Etch-A-Sketch Maze sample is to screen for motor coordination by assessing the evaluee's ability to follow a pattern by simultaneously turning two dials quickly and accurately.

MATERIALS: 1 Etch-A-Sketch Board
1 Overlay

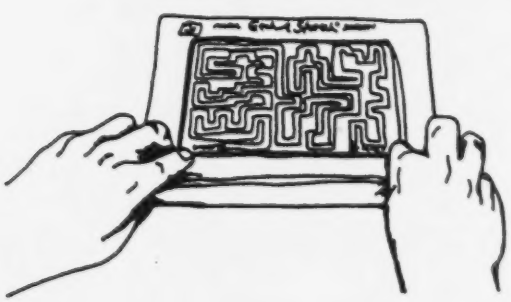
ACTIVITY: Given an Etch-A-Sketch with a specially constructed overlay, the evaluee will follow the pattern by turning the dials on the board. A practice session should be conducted to familiarize the evaluee with the operation of the board and the various methods of forming different types of lines. Make sure evaluee's head is positioned over the board.
(MAXIMUM TIME ALLOWED: 6 MIN.)
*The evaluator should make sure the beginning mark is lined up at the starting point of the overlay before timing. Show what constitutes an error by showing client scoring aid.

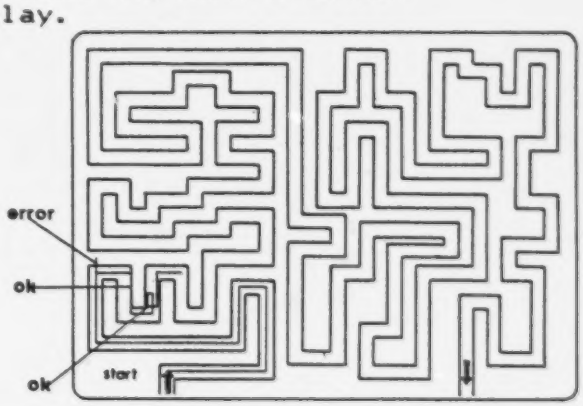
VERBAL CUE: Say: "From the start position, turn dials to move the line through the pattern until you reach finish." (Show student scoring procedure example.) Then say: "Work as quickly as you can staying within the two lines on the overlay."

INTERPRETATION: Motor Coordination: Ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. Ability to make a movement response accurately and swiftly.

SCORING: An error is counted each time the Etch-A-Sketch line intersects a line on the overlay.

Starting Position





Scoring Procedure

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SAMPLE 3

CALCULATING

PURPOSE: The objective of the Calculating sample is to assess the evaluee's clerical-numerical ability by using a calculator to compute basic addition problems.

MATERIALS:

1 Calculator	1 Roll of paper
1 Evaluee worksheet	1 Pencil

ACTIVITY: Given a worksheet, pencil, calculator and roll of paper, the evaluee will compute the answers to each of the problems on the worksheet. Before beginning the test portion, the practice problem should be completed at the top of the next page. Several attempts may be necessary before a successful completion. After checking and correcting any errors, the evaluee should continue to the timed portion of the test. Evaluee should use paper roll to check for entry error. Consult calculator manual for proper method of adding and totaling, and correct position of function switches.

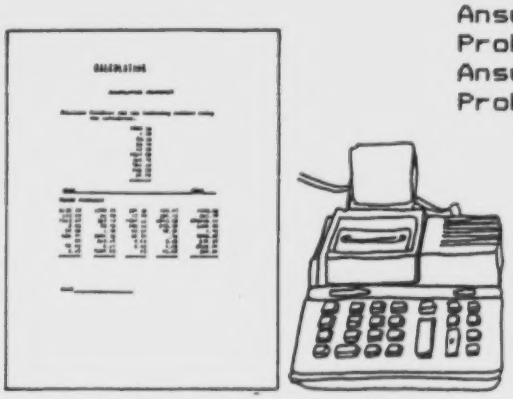
(MAXIMUM TIME ALLOWED: 12 MIN.)

VERBAL CUE: Say: "Add this column of numbers by using your calculator and place the total on your worksheet. If you desire, but it is not required, you may check your entries by looking at your paper printout." (Allow evaluee to work practice problem and correct for errors if necessary.) Then say: "Now do the remainder of the problems on your worksheet."

INTERPRETATION: Clerical Numerical: Ability to perceive pertinent detail in tabular material. Ability to observe differences in copy, proofread numbers and to avoid perceptual errors in arithmetic computation.

SCORING: There are five possible errors. An error is counted each time the student enters an incorrect total.

Starting Position
Worksheet may be placed on either side of calculator depending on evaluee preference.



Answer to Practice Problem: 5,316.12
Answers to Timed Problems:

1. 8,176.88
2. 18,774.06
3. 2,866.22
4. 7,425.18
5. 913,134.74

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SAMPLE 3

CALCULATING

CALCULATING WORKSHEET

Practice Problem: Add the following numbers using the calculator.

```
 1928.54
    1.98
   23.45
   56.75
   12.98
 1247.00
  345.78
  765.48
  896.23
   37.93
```

STOP STOP

TIMED PROBLEMS

5436.22	4378.21	321.56	123.67	1123.65
453.65	64.98	12.93	321.15	845.77
1543.87	367.12	1987.44	6213.00	893,256.11
2.65	23.76	376.44	673.92	5468.95
22.66	4.76	83.51	72.51	1.75
634.71	5694.34	68.31	.74	7693.22
.98	543.45	9.65	3.45	631.57
78.65	8.41	5.55	1.65	3746.21
3.49	7689.03	.83	15.09	367.51

NAME_____

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SAMPLE 4

SMALL PARTS

PURPOSE: The objective of the Small Parts sample is to assess for finger dexterity by having the evaluee manipulate small objects on a board.

MATERIALS: 1 Set of washers (24 minimum)
Tweezer
1 Set of 3/4" brads (12 minimum)
1 Small Parts board

ACTIVITY: Given a board with a set of brads and washers, the evaluee will place two washers side by side in the grooves on the board using a steel tweezer. Once the washers are intact, the evaluee will place a brad through holes in the washers. Before beginning the timed portion, the evaluee should be allowed sufficient time to familiarize himself with the tools, materials and procedures of this activity (allow at least three assemblies on the board but place back in tray before timing).

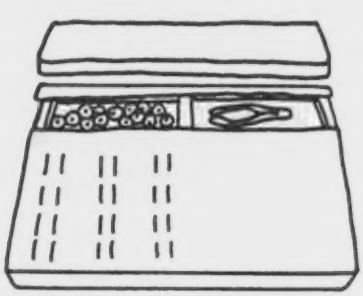
(MAXIMUM TIME ALLOWED: 7 MIN.)

VERBAL CUE: Say: "Using your tweezers, pick up the washers and place them in the grooves on the board. Then, with the tweezers, pick up the brads and insert them in the holes of the washers so that each brad rests between two of the washers. You may place the board in any position you desire but such relocation will be included in your time." (Allow evaluee to practice on three assemblies - 6 washers, 3 brads. Place practice assembly back into tray.) Then say: "Now fill all the grooves on the board."

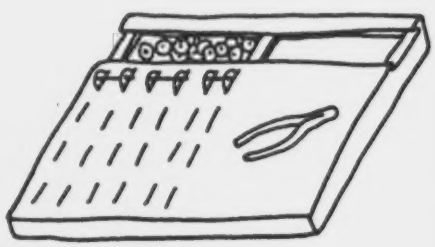
INTERPRETATION: Finger Dexterity: Ability to move the fingers and manipulate small objects. Involves the skillful use of controlled finger movements to work with tiny objects in small spaces.

SCORING: There is no error score for this sample. Student should work to completion.

Starting Position



Practice Position



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SAMPLE 5

PIPE ASSEMBLY

PURPOSE: The objective of the Pipe Assembly sample is to determine the evaluee's manual dexterity aptitude via the assembly of various pieces of hardware using the appropriate hand tools.

MATERIALS:

1 Pipe plug	1 Boiler drain (faucet)	2 Elbows
1 Screw	3 Nipples (pipes)	1 Nut
1 Tee	1 Pipe wrench	1 Cap
1 Screwdriver	1 Diagram	1 Handle

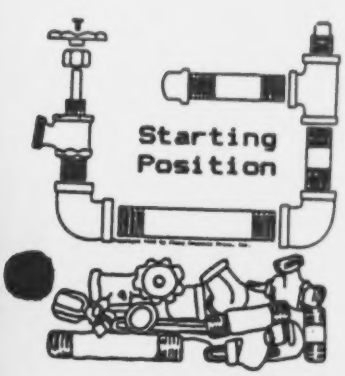
ACTIVITY: Given a diagram and an assortment of tools and hardware, the evaluee should correctly connect each of the designated pieces. After all connections are made, the assembly must be tightened using the pipe wrench and screwdriver. Allow configuration to assume whatever position is necessary for a snug fit. A short demonstration should be given to familiarize the evaluee with the correct method of handling and using the required tools. The evaluee should be allowed to make at least one connection using the pipe wrench before timing begins.

(MAXIMUM TIME ALLOWED: 12 MIN.)

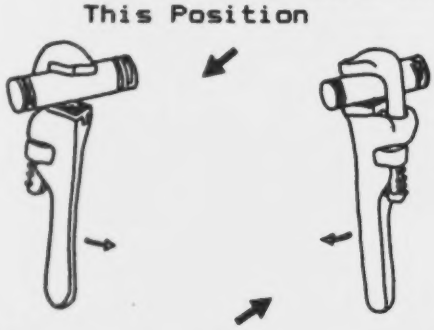
VERBAL CUE: Say: "Connect the large nipple to an elbow using the pipe wrench." (Demonstrate how pipe wrench only grabs in one direction. Disconnect practice assembly.) Then say: "Following the diagram, put all the pieces of hardware together using your hands, then tighten the assembly using your pipe wrench and screwdriver. Make sure you place all the pieces in the right order but you may allow the assembly to take on whatever shape is necessary for a snug fit.

INTERPRETATION: Manual Dexterity: Ability to move the hands easily and skillfully, to work with the hands effectively in placing and turning motions.

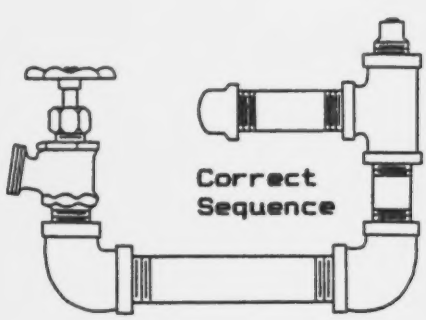
SCORING: An error is scored each time the proper sequence is broken. Only one point is scored if pipes are not tightened where possible. One point is scored if evaluee does not use tools in the assembly.

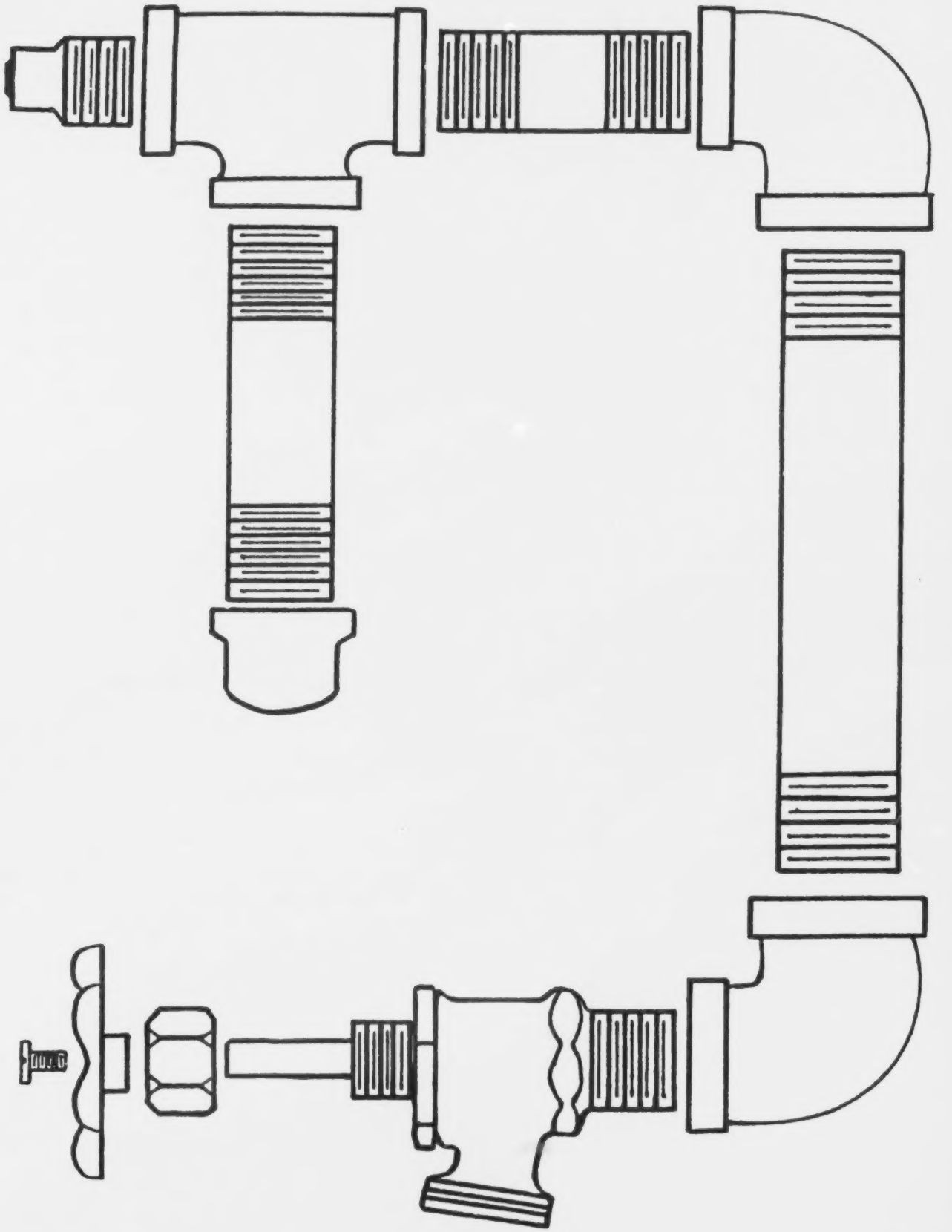


Proper Usage of
Pipe Wrench: Grabs
Counter-Clockwise in
This Position



Grabs Clockwise in This Position





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SAMPLE 6

O - RINGS

PURPOSE: The objective of sample 6 is to assess for form perception by measuring the evaluee's ability to sort objects according to size.

MATERIALS: 1 Storage Tray
1 Set of assorted O-rings
(12 different sizes - 2 each of 3 larger sizes, 5 each of smaller sizes)
1 Nail for checking errors

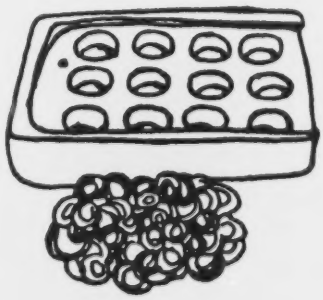
ACTIVITY: Mix all the o-rings in a pile in front of evaluee. Instruct evaluee to sort all the o-rings according to exact size. After all the o-rings are sorted they should be placed into tray, one size per compartment. The o-rings should not be placed into tray before all are sorted. The o-rings may be placed into the tray in any order. The evaluee may be allowed to practice matching several sizes to determine if the directions are clearly understood.

VERBAL CUE: SAY: "Separate all the o-rings by placing the o-rings of the exact same size in a stack or pile. After you have separated all the o-rings, place each pile of the same size into a separate compartment in the storage tray."
(MAXIMUM TIME ALLOWED: 6'45")

INTERPRETATION: Form Perception: Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures.

SCORING: This activity has a maximum of 12 errors. An error is counted when a compartment contains different sized o-rings. Only one error is counted per compartment. Errors may be quickly checked by placing o-rings in the same compartment on a nail. (Do not allow evaluee to use this method.)

Starting Position



Scoring Procedure

Correct

Incorrect

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SAMPLE 7

BLOCK DESIGN

PURPOSE: The objective of the Block Design is to screen for basic spatial perception by having the evaluee follow a diagram to construct a three dimensional block design.

MATERIALS: 20 Blocks
1 Diagram

ACTIVITY: Remove blocks from bag and place in front of evaluee. Give evaluee diagram and instruct him/her to construct blocks exactly as shown in diagram. No practice is necessary in this sample, however, if it is apparent that evaluee did not understand instructions, you may readminister directions and then begin with a new starting time.

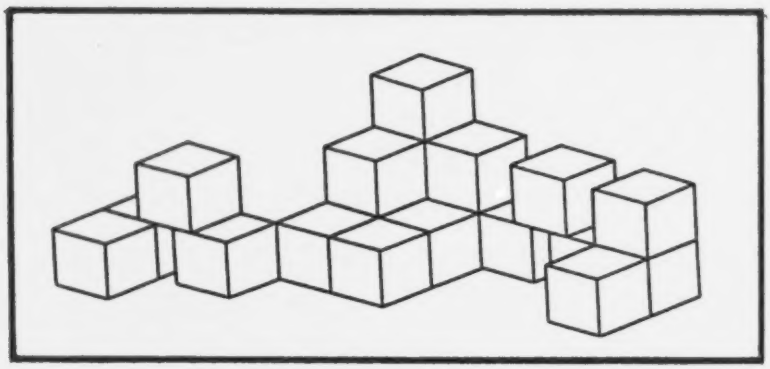
(MAXIMUM TIME ALLOWED: 5 MIN.)

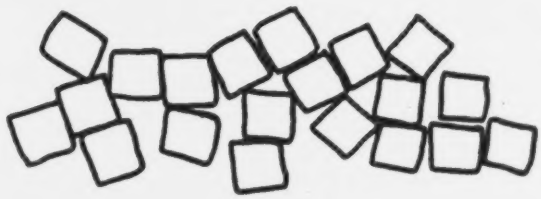
VERBAL CUE: Say: "Place all the blocks so that they look exactly like the pattern on the diagram."

INTERPRETATION: Spatial Perception: Ability to think visually of geometric forms and to comprehend the two-dimensional representation of three-dimensional objects.

SCORING: An error is scored for each incorrect spatial placement.

Starting Position





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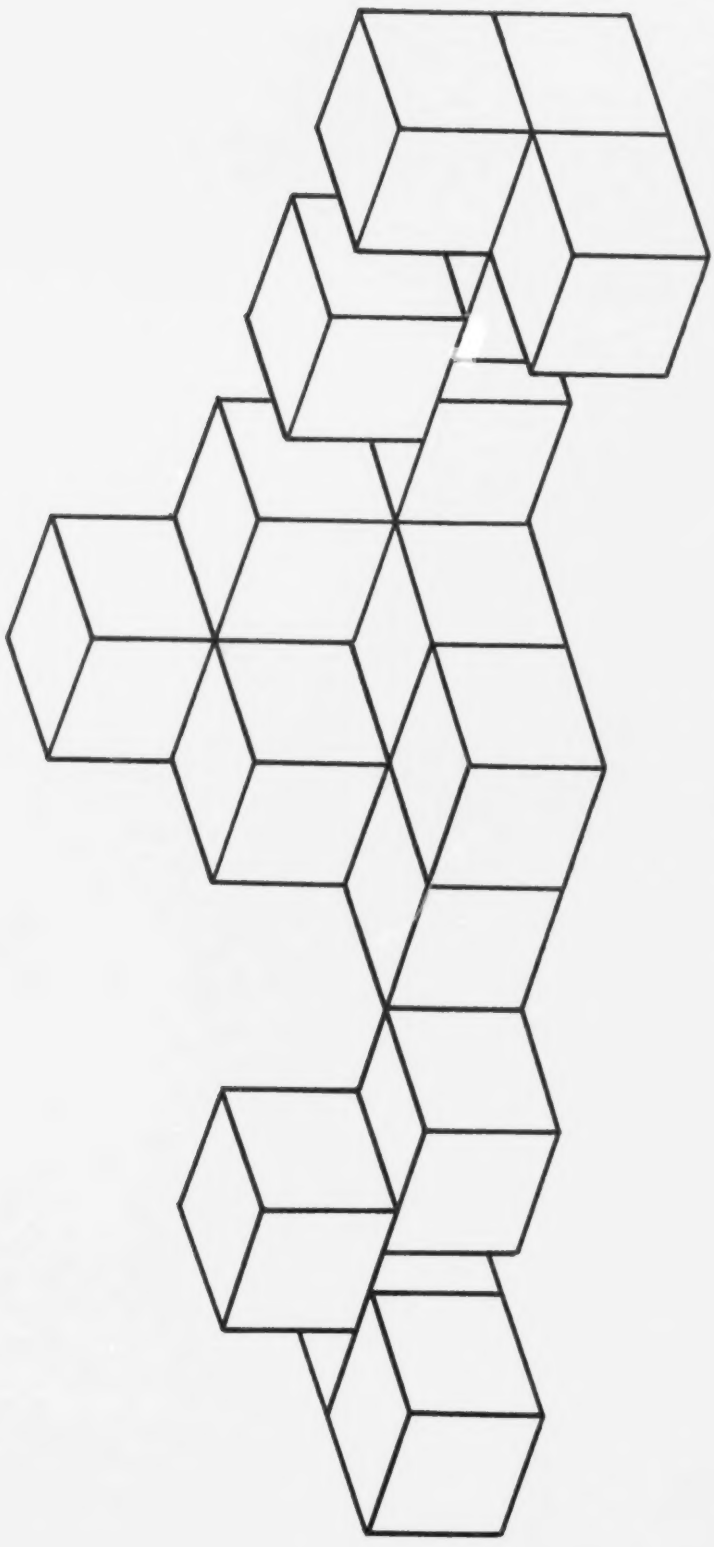


20

SAMPLE 8

COLOR SORT

PURPOSE: The objective of the Color Sort is to assess an evaluee's color perception by his/her ability to collate color coded cards.

MATERIALS: 50 Cards with colored stickers (7 different colors)

ACTIVITY: Evaluee should sort cards into separate stacks by matching the color in the center of the card. Allow evaluee to sort 10 cards for practice. Time the evaluee on sorting the balance (40) of the cards. Evaluee may sort the colors in any order and the stacks may be arranged to suit evaluee's preference. Make sure cards are thoroughly shuffled after each administration.

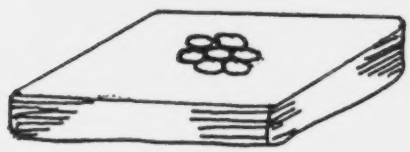
(MAXIMUM TIME ALLOWED: 3 MIN.)

VERBAL CUE: Say: "Match the color in the center of the card by placing the cards with the same color into the same stack. Place different colors in separate stacks. The cards may be handled as you desire but any movement of the stack, etc, will be added to the overall time." (Give the student 10 cards for practice. Leave the 10 cards in place when practice is completed.) Then say: "Sort the remaining cards the same way you did the first ten."

INTERPRETATION: Color Discrimination: Ability to perceive and recognize similarities or differences in shades, magnitude and hue of the same color and/or to match colors accurately.

SCORING: An error is scored each time a stack contains two or more different colors. There are a maximum of 7 errors.

Starting Position



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REPORTING PROCEDURES

Before starting with the samples, fill out the information requested on the Intake Form. A definition of terms on page 5 will help explain the terms found in the Related Vocational Criteria section. The information requested on the Intake Form may be obtained from the following sources:

1. School Records
2. Instructor Ratings
3. Work Records
4. Employer Ratings
5. Personal interview with evaluee
6. Tests designed specifically to assess the criteria outlined. (See page 4 for add-ons)

The Reporting Form on page 21 should be filled in as evaluee completes each sample. After directions have been administered, enter the exact starting time under the minutes and seconds column (you may start with any sample and rotate evaluee through the samples in any order). When evaluee has finished, immediately enter the stop time. Then subtract the start time from the stop time and enter total time. If you are using a stop watch simply enter stop time.

Next, count the number of errors by following the scoring procedure on the instruction sheets and enter total in the error column on the Reporting Form.

If you are using a computer to score, run your PAS scoring disk for directions. (Documentation on page 31.) If you do not have a scoring disk do the following: Go to the section in the manual on Normative Data (page 27) and find the corresponding percentiles by matching the times and errors on the Reporting Form with the times and errors listed under each sample. Enter the percentiles under the percentile column on the Reporting Form for time and then for error. A combined rating is obtained by adding the time and error percentile on a particular sample and dividing this total by two. A profile graph may be obtained by entering points on the Performance Profile Graph that corresponds with the evaluee's percentile score on each sample. Connect the points with straight lines.

To correlate results to your training programs by hand go to page 22. If you have a computer, go to page 35 for instructions.

INTAKE FORM

DATE _____

NAME _____ REFERRED BY _____

ADDRESS _____ CITY _____

AGE _____ BIRTHDATE _____ SEX _____ GRADE _____ OCCUPATION _____

PHYSICAL PROBLEMS _____

ACADEMIC PROBLEMS _____

RELATED VOCATIONAL CRITERIA (See Definition of Terms for alternatives and explanations):

1. Academic courses preferred:

2. General Educational Development:
   a. General Learning Ability:
   b. Verbal Ability:
   c. Numerical Ability:

3. Physical Capacities:

4. Specific Training Time Preferred:

5. Temperment:

6. Type or types of work preferred:

7. Work activities preferred (working with data, people or things):

8. Work Conditions Preferred:

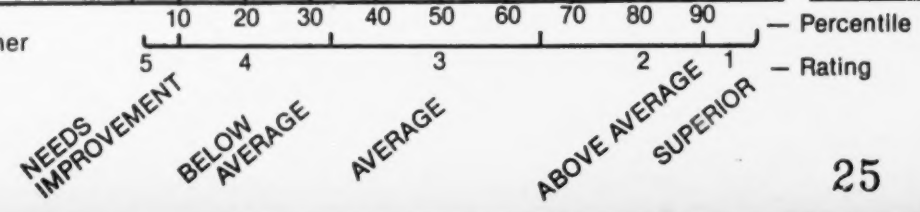
REPORTING FORM

NAME AGE GRADE SEX DATE

ADDRESS PHONE NUMBER SCHOOL

Sample	Mins. & Secs.	%	Errors	%	Combined Score*	Performance Profile Graph	Aptitudes
1. Alphabetizing	Stop _____ Start _____ Total _____						Clerical/ Verbal
2. Etch-A-Sketch Maze	Stop _____ Start _____ Total _____						Motor Coordination
3. Calculating	Stop _____ Start _____ Total _____						Clerical/ Numerical
4. Small Parts	Stop _____ Start _____ Total _____						Finger Dexterity
5. Pipe Assembly	Stop _____ Start _____ Total _____						Manual Dexterity
6. O-Rings	Stop _____ Start _____ Total _____						Form Perception
7. Block Design	Stop _____ Start _____ Total _____						Spacial Perception
8. Color Sort	Stop _____ Start _____ Total _____						Color Perception

*To obtain a Combined Score, add the time and error percentiles together and divide by two.



MATRIX
FOR
CORRELLATING APTITUDES TO VOCATIONAL TRAINING PROGRAMS

	AGRICULTURE	AUTO BODY	AUTO MECHANICS	CHILD CARE	CLOTHING	COSMETOLOGY	CONSTRUCTION	DRAFTING	ELECTRONICS	ELECTRO-MECH.	FOOD SERVICE	GRAPHIC ARTS	HEALTH OCCUP.	HORTICULTURE	MACHINE SHOP	MARKETING	OFFICE OCCUP.	WELDING	WOOD WORKING	STUDENT RATING
CLERICAL VERBAL																				
MOTOR COORDINATION																				
CLERICAL NUMERICAL																				
FINGER DEXTERITY																				
MANUAL DEXTERITY																				
FORM PERCEPTION																				
SPATIAL PERCEPTION																				
COLOR PERCEPTION																				

Directions: Using the following scale, have each Instructor rate under their course area the importance of the aptitudes listed in the left hand column of the matrix.

1 — CRITICALLY SIGNIFICANT

2 — ABOVE AVERAGE SIGNIFICANCE

3— AVERAGE SIGNIFICANCE

4 — BELOW AVERAGE SIGNIFICANCE

5 — NO SIGNIFICANCE

Give Instructor a set of the Definition of Terms (page 5) when they are rating aptitudes so they understand exactly what each term means. It may be necessary to modify an instructor's rating if results prove unrealistic. Refer to the HANDBOOK FOR ANALYZING JOBS published by the Department of Labor for information concerning aptitude patterns in jobs.

An evaluee rating based upon scores found on your Reporting Form or computer print-out should be entered in the right hand column under "Student Rating".

Now you can compare Instructor ratings with evaluee's scores. If a student or evaluee scores 4 or 5 on a particular aptitude and an Instructor has rated the aptitude as critically important in their curriculum, remidiation or alternative courses should be considered. On the other hand, if an evaluee scores average or better in areas rated as a 1, 2 or 3 by the Instructor, it is an indication that the evaluee has the necessary aptitude to perform effectively in that vocational program.

DOT CORRELATION

OCCUPATIONAL APTITUDE PATTERNS (OAP'S) AND THEIR NONSUPERVISORY OCCUPATIONAL COVERAGE IN WORK GROUPS OF THE GUIDE FOR OCCUPATIONAL EXPLORATION.

When using the following table, you may refer to the SELECTED CHARACTERISTICS OF OCCUPATIONS DEFINED IN THE DICTIONARY OF OCCUPATIONAL TITLES handbook published by the U.S. Government Printing Office. Appendix E in the same publication will guide you in correlating specific occupations found within the work groups listed in the table below.

Refer to the following code for identifying the aptitude requirements for a specific work group. The numbers refer to the P.A.S. sample numbers.

G = Intelligence
V = Verbal
N = Numerical
1,3 = Clerical (Q)
2 = Motor Coordination (K)
4 = Finger Dexterity (F)
5 = Manual Dexterity (M)
6 = Form Perception (P)
7 = Spatial Aptitude (S)

	GUIDE FOR OCCUPATIONAL EXPLORATION WORK GROUP				Limits of DOT Occupations Coverage		
OAP	APTITUDE REQUIREM.	CODE	TITLE		TOTAL	APPLIES	%
1	G,V,1,3	01.01	Literary Arts	0	18	16	89
2	G,5,6	01.02	Visual Arts	all	45	45	100
3	G,V	01.03	Performing Arts: Drama	0-2	25	23	92
4	G,V,1,3	01.04	Performing Arts: Music	0	13	10	77
5	G,7	01.05	Performing Arts: Dance	all	4	4	100
6	5,6,7	01.06	Craft Arts	2-6	169	163	96
7	G,V,N,7	02.01	Physical Sci.	all	28	28	100
8	G,V,N,7	02.02	Life Sciences	all	50	50	100
9	G,V,N,7	02.03	Medical Sci.	0-1	47	44	90
10	G,N	02.04	Lab. Tech.	2-3	82	66	80
11	G,N	03.01	Managerial Work: Plants & Animals	1-3	50	49	98
12	G,5	03.03	Animal Training & Service	2	14	5	36
13	2,5	03.03	Animal Training & Service	3-6	14	9	64
14	2,5	03.04	Elemental Work: Plants & Animals	all	154	154	100
15	G,1,3	04.01	Safety & Law Enforcement	all	45	44	98
16	G	04.02	Security Svcs.	1-3	55	25	45
17	G,N,7	05.01	Engineering	0-1	161	152	94
18	G,V,N,7	05.02	Managerial Work: Mechanical	all	67	67	100
19	G,N,7	05.03	Engineering Technology	1-2	139	111	80

20	G,N,7	05.04	Air & Water Vehicle Oper.	1-2	24	21	88
21	5,6,7	05.05	Craft Tech.	2-6	590	582	99
22	N,6,7	05.07	Quality Control	1-2	68	26	38
23	5,6,7	05.08	Land & Water Vehicle Oper.	all	38	38	100
24	G,N,1,3	05.09	Materials Cont.	1-4	147	87	59
25	1,2,3	05.09	Materials Cont.	5	147	34	23
26	5,6,7	05.10	Crafts	1-4	383	246	64
27	2,5,6	05.10	Crafts	5-6	383	137	36
28	5,6,7	05.11	Equip. Oper.	all	128	128	100
29	2,5	05.12	Elemental Work: Mechanical	all	417	417	100
30	N,6,7	06.01	Production Tech	1-2	368	92	25
31	5,6,7	06.01	Production Tech	3-6	368	276	75
32	2,5,6	06.02	Production Work	all	1,565	1,565	100
33	2,5,6	06.03	Quality Control	all	552	552	100
34	2,4,5	06.04	Elemental Work: Industrial	all	3,894	3,894	100
35	G,N,1,3	07.01	Administrative Detail	all	60	60	100
36	G,N,1,3	07.02	Mathematical Detail	all	99	99	100
37	G,N,1,3	07.03	Financial Detail	all	25	25	100
38	G,1,3	07.04	Oral Communications	all	99	99	100
39	G,1,3	07.05	Records Processing	all	146	146	100
40	G,1,2,3	07.06	Clerical Mach. Operation	all	38	38	100
41	1,2,3	07.07	Clerical Handling	all	35	35	100
42	G,V,N,1,3	08.01	Sales Tech.	all	60	60	100
43	G,N,1,3	08.02	Gen. Sales	all	141	141	100
44	2,5	08.03	Vending	all	7	7	100
45	G	09.01	Hsopitality Svc.	all	32	32	100
46	2,5,6,7	09.02	Barber & Beauty Services	all	6	6	100
47	5,7	09.03	Passenger Svc.	all	9	9	100
48	2,5	09.05	Attendant Svc.	4-6	64	56	88
49	G,V,N,1,3	10.01	Social Svcs.	all	29	29	100
50	G,V	10.02	Nursing, Therapy and Specialized Teaching Svcs.	all	48	48	100
51	G	10.03	Child & Adult Care	all	32	32	100
52	G,V,N,7	11.01	Mathematics & Statistics	0-1	21	19	90
53	G,V,N,1,3	11.02	Educational & Library Svcs.	1-2	48	36	75
54	G,1,3	11.02	Educational & Library Svcs.	3	48	12	25
55	G,V,N	11.03	Social Research	0-1	33	26	79
56	G,V,N,1,3	11.03	Social Research	2-3	33	7	21
57	G,V,N	11.04	Law	1	27	21	78
58	G,V,N,1,3	11.04	Law	2	27	6	22

59	G,V,N,1,3	11.05	Business Admin.	all	115	115	100
60	G,V,N,1,3	11.06	Finance	0-1	52	37	71
61	G,V,N,1,3	11.07	Services Admin.	all	66	66	100
62	G,V,N,1,3	11.08	Communications	all	19	19	100
63	G,V,N,1,3	11.09	Promotion	all	20	20	100
64	G,V,N,1,3	11.10	Regulations Enforcement	1-2	48	45	94
65	G,V,N,1,3	11.11	Business Mgmt.	all	72	72	100
66	G,V,N,1,3	11.12	Contracts & Claims	all	34	34	100

PREVOCATIONAL ASSESSMENT SCREEN
TECHNICAL INFORMATION

I. INTRODUCTION

The PREVOCATIONAL ASSESSMENT SCREEN, PAS, is designed to provide an instructor or evaluator with a quick and simple method of screening individuals for training and for job placement. Developed by special needs evaluators and educators, PAS accommodates the problem of assessing large numbers of evaluees in a short period of time in informal, nonstructured settings.

PAS can be run on several evaluees at the same time and takes less than 50 minutes to administer and score. Compact and highly mobile, PAS approximates the size of a large tool box and is entirely self-contained. There are no consumable pieces for repurchase. No training is required so that administration may begin immediately and new evaluators or instructors do not have to sacrifice valuable testing time while waiting on an inservice. Finally, PAS is normed on populations appropriate for training placement as well as job placement.

II. NORMS

The evaluee's score is determined through the use of a norm. A norm refers to the development of a range of scores on a specific activity that can be used as a point of reference for comparing the individual with a specific group. The Norms on the PREVOCATIONAL ASSESSMENT SCREEN were determined by psychometric techniques and by predetermined time studies (MTM-1). The psychometric norm is useful when placing students into training programs and was developed on average vocational, handicapped, and disadvantaged students. The MTM-1 time standard is used when job placement is the objective.

The psychometric norms were generated in eight data collection sites in urban, suburban, and rural secondary and post secondary schools. A separate norm is available on average, mildly handicapped and disadvantaged youths. All norms contain approximately 50 percent female, 50 percent male which average between 14-21 years of age. See specific norm chart on the following page for numbers, means, standard deviations and percentiles. Separate percentiles are provided on time and error to maintain a clear delineation of speed and accuracy.

The MTM-1 norm was generated by Maynard Research Council, Inc., a member of the Methods Engineering Council, Inc. The Data Base for the time values are derived from the application of Methods-Time Measurement (MTM-1) to the motion patterns that are required to perform the work. In MTM the actual finger, hand, body, etc. motions are recorded based on type, distance, level of difficulty, etc. and then predetermined times are entered that match the information entered. The MTM predetermined time system was developed by the late H. B. Maynard. This MTM time information system is used internationally and has withstood the test of time and the investigation of numerous centers of higher learning as to its accuracy.

See MTM Data on page 28 for instructions on their use.

PREVOCATIONAL ASSESSMENT SCREEN NORMATIVE DATA

AVERAGE VOCATIONAL STUDENTS BETWEEN 14-21 YEARS OF AGE

	RATING	%	1 ALPHABETIZING T	1 ALPHABETIZING E	2 ETCH-A-SKETCH MAZE T	2 ETCH-A-SKETCH MAZE E	3 CALCULATING T	3 CALCULATING E	4 SMALL PARTS T	4 SMALL PARTS N/A	5 PIPE ASSEMBLY T	5 PIPE ASSEMBLY E	6 O-RINGS T	6 O-RINGS E	7 BLOCK DESIGN T	7 BLOCK DESIGN E	8 COLOR SORT T	8 COLOR SORT E
1	SUPERIOR	99	2	0	2	0	3	0	2		2	0	2	0	.30	0	.30	0
		97	2.10		2.05		4		2.15		2.15		2.03		.35		.35	
		95	2.15		2.10		4.05		2.3		2.30		2.05		.40		.37	
2	ABOVE AVERAGE	90	2.35		2.13		4.15		2.45		3		2.15		.50		.42	
		85	3.00		2.20		4.36		3		3.15		2.50		.52		.45	
		80	3.3		2.30		4.50		3.15		3.3		3.01		1		.47	
		75	4		2.40	1	5.00		3.30		3.45		3.03		1.02		.50	
		70	4.10		2.45		5.15		3.45		4.00		3.04		1.03		.51	
3	AVERAGE	65	4.20		2.55		5.30		3.49		4.20		3.20	1	1.04		.53	
		60	4.50	1	3		5.45		3.58		4.45		3.40		1.06		.56	
		55	5.05		3.10	2	5.55		3.59		5		3.55		1.07		.59	
		50	5.10		3.19		6.10	1	4.00		5.15		4.00	2	1.08		1.00	
		45	5.28	2	3.27	3	6.35		4.10		5.35		4.02		1.15		1.01	
		40	6		3.35		7		4.3		5.52		4.10		2	1	1.01	
		35	6.03		3.43		7.40		4.39		6.10	1	4.50		2.07			
		30	6.30		3.52		8.12		4.52		6.40		5.03	3	2.20		1.02	
4	BELOW AVERAGE	25	6.55	3	4	4	8.45		5.08		7		5.09		2.30		1.04	
		20	7.15		4.30		9.15	2	5.35		8		5.15	4	2.40	2	1.10	
		15	7.50	4	5	5	9.50		5.45		9.30		5.23		2.50		1.15	
		10	8.15	5	5.3	6	10.30	3	6.00		10.30		5.52	5	2.59	3	1.25	
5	NEEDS IMP.	5	9.00	6	6	9	12	4	6.30		11.45	2	6.45	6	5.30	4	2	1
	N		136		82		82		82		82		136		81		136	
	M		5.3		3.07		6.33		4.15		5.36		4.07		1.38		1.03	
	SD		2.29		.57		1.33		1.7		1.29		1.22		.53		.28	

Directions:
Match students time and errors to the nearest time and error score listed under each sample. Times are listed under T and errors are listed under E. Times are listed as minutes and seconds. Thirty seconds is represented as .3.

The percentile and rating for each score are listed in the left hand column of the chart. Enter the percentile and rating on the Reporting Form.

PREVOCATIONAL ASSESSMENT SCREEN

PINEY MOUNTAIN PRESS, INC.

MTM-1 ANALYSIS SUMMARY
BY
MAYNARD RESEARCH COUNCIL, INC.

	SAMPLE	APTITUDE	TMU	MIN-SEC
1.	ALPHABETIZING	CLERICAL VERBAL	4540.1	2-45
2.	ETCH-A-SKETCH	MOTOR	3241.9	1-57
3.	CALCULATING	CLERICAL NUMERICAL	7353.8	4-25
4.	SMALL PARTS	FINGER	2959.1	1-47
5.	PIPE ASSEMBLY	MANUAL	3388.6	2-02
6.	O-RINGS	FORM	3400.9	2-02
7.	BLOCK DESIGN	SPATIAL	759.8	0-27
8.	COLOR SORT	COLOR	983.7	0-35

The predetermined time listed as minutes and seconds expresses the average time it would take an average worker to perform the sample with no errors. The time is based on workers trained and practiced in performing the specific motor and perceptual skills listed above. When comparing untrained handicapped or disadvantaged populations to an MTM time, it is important to recognize this fact and allow for ample practice so that an evaluee's real potential may be observed. You may readminister the samples as many times as you wish to determine whether or not an evaluee has the potential of surviving in a competitive work place using the motor and perceptual skills outlined in the PAS instrument.

III. RELIABILITY

The concept of reliability deals with the consistency of the score. When readministered, a good work sample generates relatively the same score on an individual by maintaining a consistent relationship between the single score and the group score.

Reliability is estimated by the strength of the relationship between two logically defined sets of data on the same sample. The relation is called a correlation.

The Pearson's r statistic was used to determine P.A.S.'s correlation coefficients using the Test-Retest method. The Test-Retest method was administered over a 3-5 day cycle.

The Pearson's r generated the following results:

Module	Time Scores
1	.84
2	.91*
3	.81*
4	.84
5	.82
6	.95
7	.89*
8	----

*Spearman's Footrule correlation used due to pattern of distribution.

IV. VALIDITY

Validity is a rational and statistical process for determining the degree to which the sample measures what it says it measures.

The PREVOCATIONAL ASSESSMENT SCREEN bases its validity on several sources. First, content validity is established via the performance aptitude matrix. The matrix relates tasks required in the various vocational training programs within a specific institution to evaluee's performance on related tasks. Individual vocational instructors rate the importance of specific tasks in their own curriculum. These ratings are then compared to evaluee's scores on the individual tasks.

Empirical validity was established by comparing evaluee's grades and prevocational skills to performance on the various samples. A marked relationship exists between evaluee's performance on the samples and their prevocational skills.

Predictive validity is based upon the validity of our MTM standard. However, because PAS is a simple screening device which is concerned with only certain motor and perceptual skills as they relate to training and jobs the predictability is limited to those eight characteristics; clerical-verbal, motor, clerical-numerical, finger, manual, spatial, form and color. If an evaluee can score close to the MTM standard, he or she has the potential to be competitive in training and in jobs where these particular motor and perceptual performances are required. However, there are many other variables that must be taken into account which will affect success in training and in jobs which PAS does not consider.

PART'S LIST

	SAMPLE	ITEMS	*PRICE
I.	ALPHABETIZING	File Box 4x6	5.00
		Alphabetical Dividers 4x6	5.00
		Preaddressed Cards 4x6	5.00
II.	ETCH-A-SKETCH MAZE	Etch-A-Sketch with overlay	45.00
III.	CALCULATION	Calculator	75.00
IV.	SMALL PARTS	Board	95.00
		Tweezers	5.00
		Brads	1.00
		Washers	2.00
V.	PIPE ASSEMBLY	1 Plug 1/2"	5.00
		1 Boiler Drain 1/2"	7.50
		1 Tee 1/2"	5.00
		1 Cap 1/2"	5.00
		1 Nipple 5x3/4"	5.00
		1 Nipple 2x1/2"	5.00
		1 Nipple 1x1/2"	5.00
		1 Pipe Wrench 8"	20.00
		1 Stubby Flathead Screwdriver 1/4"	5.00
		2 Elbows 1/2"x3/4"	10.00
VI.	O-RINGS	Complete Pack	45.00
		Individual rings	1.00
VII.	BLOCK DESIGN	Set of Blocks	15.00
		Individual Blocks	1.00
		Block bag	5.00
VIII.	COLOR SORT	Cards	15.00
IX.	MANUAL		75.00
X.	CARRYING CASE		95.00
XI.	P.A.S. COMPUTERIZED SCORING DISK (Apple, 64K)		120.00
XII.	LOCAL NORM DEVELOPMENT SYSTEM		295.00

*Prices are intended for replacement of lost or broken parts only.

PAS

DOCUMENTATION FOR COMPUTERIZED SCORING AND TRAINING PERFORMANCE MATRIX

P.A.S.

DOCUMENTATION FOR COMPUTERIZED SCORING SYSTEM

I. PURPOSE - The Computerized Scoring System enables the user of the PREVOCATIONAL ASSESSMENT SCREEN to obtain percentile scores and performance graphs on students via the Apple Computer. Raw data on the student's times and errors are entered into the scoring system and the program calculates percentile scores. Results are printed or displayed on the screen. The program is designed to help eliminate math and clerical errors and save time: The system saves the evaluator approximately 10 to 15 minutes over the manual method.

II. USE

A. Insert Scoring Disk into Disk Drive and turn computer on.
B. Enter today's date.
C. Press Return.
D. Instructions

Welcome to PREVOCATIONAL ASSESSMENT SCREEN computer assisted scoring. You will be asked to enter personal data for each evaluee and a series of time and error scores for each category of testing performed. Times should be accurately measured and entered in the form minutes: seconds. This program will automatically calculate correct duration of tests beginning during one hour and ending within another. There's more!

E. Press any key to continue instuctions.

Instructions to assist you with entering and correcting scores and times are provided on each screen, so if you make a mistake, don't worry! You will be given an opportunity to easily correct any mistakes before proceeding to the next part of the program. You may also display final results on your printer or on the computer screen alone as desired.

G. Press any key to continue.
H. Your next screen should look like this:

Please enter evaluee's personal data:

Name:
Street address:
Apartment:
City:
State:
Zip code:
Phone Number:
SSN:
Age:
Sex:
School/Employer:
Grade/Profession:

Type in appropriate information on evaluee. Press RETURN when each item is completed.

I. When all lines are completed, computer will ask: "Is this information correct?" (Bottom of screen)
   1. Press "Y" if everything is correct.
   2. Press "N" if you wish to change anything. Cursor will start on first line. Press RETURN to maintain what you have entered. Type corrections where needed.
   3. When finished type "Y" to proceed or "N" if there are still corrections required.

J. Your next screen looks like this:

Data Entry and Edit

Test Name	Start Time	Stop Time	Error Score
Alphabetizing	00:00	00:00	0
Etch-A-Sketch Maze	00:00	00:00	0
Calculating	00:00	00:00	0
Small Parts	00:00	00:00	0
Pipe Assembly	00:00	00:00	0
O-Rings	00:00	00:00	0
Block Design	00:00	00:00	0
Color Sort	00:00	00:00	0

Use arrow keys to select field for entry or editing. Press RETURN when finished.

1. Use your arrow keys to select field (place) for entering times and errors. Right arrow key ( ) moves cursor to right. Left arrow key ( ) moves cursor to left. To enter times type in minutes, press space bar then type in seconds.
2. You may move to any test by pressing your down ( ) arrow key or your up ( ) arrow key. The system is set up to run any number of samples you desire.
3. If you are using any timing device other than a stop watch, enter the beginning time under start time and enter the finish time under stop time. The computer will calculate the total time. If you are using a stop watch, move your cursor using your right ( ) arrow key under stop time and enter time.
4. To enter number of errors, move cursor under error score and type in numbers.
5. If you make an error use arrow keys to move and type correction.
6. When finished entering data, press RETURN twice, computer will then ask if everything is correct: Type "N" if there are changes; Type "Y" if everything is correct.
7. The next screen will ask:
   How do you want your results displayed?
   1. On your printer
   2. On your screen
8. If you type 2, you will get a screen display which will only list percentiles for time and for error.
9. If you type 1, you will get a printout: See following page.

P.A.S.
COMPUTERIZED SCORING SYSTEM
12-12-85

Johnny Future
LD Lane, APT. BD
Enigma , Ga. 33333
333-3333

SSN: 333-3333
Age: 14
Sex: Male

School/Place of work: High Hope Voc. High
Grade/Profession: 9

CATEGORY	APTITUDE	TIME (SEC) SCORE	TIME (SEC) %TILE	ERROR SCORE	ERROR %TILE	MTM-1 (SEC)
Alphabetizing	Clerical/Verbal	600	3.45	4	16.1	163
Etch-A-Sketch Maze	Motor Coordination	210	43.9	1	75.6	117
Calculating	Clerical/Numerical	240	97.5	1	48.7	265
Small Parts	Finger Dexterity	150	96.3		N/A	107
Pipe Assembly	Manual Dexterity	150	94.5	0	100	122
O-Rings	Form Perception	210	63.2	2	50.7	122
Block Design	Spatial Perception	120	38.2	1	29.6	27
Color Sort	Color Discrimination	60	52.2	0	100	35

GRAPHIC REPRESENTATION OF PERCENTILES
TIME AND ERROR AVERAGES

```
|
| Clerical/Verbal (9.775%)
| ********
|
| Motor Coordination (59.75%)
| ************************************************
|
| Clerical/Numerical (73.1%)
| ************************************************************
|
| Finger Dexterity (96.3%)
| *******************************************************************************
|
| Manual Dexterity (97.25%)
| ********************************************************************************
|
| Form Perception (56.95%)
| ***********************************************
|
| Spatial Perception (33.9%)
| ****************************
|
| Color Discrimination (76.1%)
| ***************************************************************
|_____________________________________________________________________
   5   |      4      |         3         |      2      |   1
 0%-10%      11%-33%          34%-65%          66%-89%      90%-
                    NUMERICAL RATING
```

Each '*' stands for 1.25 percentile points
These percentiles represent the average of the time and error percentiles

P.A.S.
COMPUTERIZED SCORING SYSTEM
10-2-85

Johnny Future
LD Lane, APT. BD
Enigma, Ga 33333
333-3333

SSN: 33333333
Age: 14
Sex: Male

School/Place of work: High Hope Voc. High
Grade/Profession: 9

CATEGORY	APTITUDE	TIME (SEC) SCORE	TIME (SEC) %TILE	ERROR SCORE	ERROR %TILE	MTM-1 (SEC)
Alphabetizing	Clerical/Verbal	420	24.2	2	43.3	167
Etch-A-Sketch Maze	Motor Coordination	180	62.1	1	75.6	117
Calculating	Clerical/Numerical	300	75.6	1	48.7	265
Small Parts	Finger Dexterity	180	85.7		N/A	107
Pipe Assembly	Manual Dexterity	180	89.0	0	100	122
O-Rings	Form Perception	360	9.44	2	50.7	122
Block Design	Spatial Perception	120	38.2	1	29.6	27
Color Sort	Color Discrimination	60	52.2	0	100	35

Name of Module

Primary Aptitude or Trait assessed

Time Score in seconds

Percentile for Time Score based on vocational norms.

Number of Errors

Percentile for Error Score based on vocational norms.

Time in seconds that an average worker employed in an activity involving this trait would perform task. (An MTM assumes there are no errors.)

P A S

PREVOCATIONAL ASSESSMENT SCREEN

DOCUMENTATION FOR THE VOCATIONAL TRAINING PERFORMANCE MATRIX

Introduction

The VOCATIONAL PERFORMANCE MATRIX shows the relationship between a student's scores on the PREVOCATIONAL ASSESSMENT SCREEN and ratings provided by vocational instructors on perceptual and motor skills which relate to their specific training program.

The program is set up so that the user may utilize the ratings available in a predefined matrix, modify a predefined matrix or create an entirely new matrix. The predefined matrix included on the disk (DOL) is based on Department of Labor classifications and data provided by our test sites and therefore may not reflect the requirements of a specific training program.The user may modify the predefined (DOL) matrix to fit their specific requirements or set up an entirely new matrix to preserve the predefined (DOL) matrix. The user may also utilize the programs existing vocational clusters as listed below or modify listings to accomodate their specific needs.

VOCATIONAL CLUSTERS

Agriculture	Business & Office	Cosmetology
Construction	Drafting	Electro-Mech
Electronics	Food Service	Graphic Arts
Health Occupations	Marketing	Metalworking
Occup. Home Ec	Transportation	Woodworking

Once a student's scores are entered the user may select any number of training programs in the menu with which to correlate the student's performance.

The program will generate on screen or print-out instructors' ratings, student's performance and a weighted score which provides a correlation between the ratings and the score.

GETTING STARTED

1. Insert our disk titled PREVOCATIONAL PERFORMANCE MATRIX in disk drive 1 and turn computer on.
2. Your next screen should look like this:

Vocational Performance Matrix

Copyright 1985

Piney Mountain Press, Inc.

Please enter today's date:

(Please press <RETURN> to continue)

---

3. Enter the date (any format).
4. Press return.
5. Your next screen should look like this:

```
-------------------------------------------------
        Vocational Performance Matrix
                Main menu
           1.  Use a predefined matrix
           2.  Create or edit a matrix
           3.  Delete a matrix
           4.  Edit Vocational Titles
           5.  Quit
         Enter selection=>
-------------------------------------------------
```

6. Type the number of the option in the menu that you desire. *

7. If you wish to use a predefined matrix type 1.

8. Your next screen should look like this:

```
-------------------------------------------------
          Available Evaluation Matrices
          1: DOL

       Type the number of the matrix you wish
       to use or type 0 to exit
-------------------------------------------------
```

9. At this point your program should contain only one predefined matrix (DOL). This matrix is based on Department of Labor classifications and data provided by our test sites; it may or may not reflect the specific requirements of your training

* If you wish to edit Vocational Titles see line 39 first.

programs. See page (5) for a breakdown of these ratings. If you wish to edit the DOL matrix go to line 25, in this outline.

10. If you wish to use the DOL matrix type 1 then press return.

11. Your next screen should look like this:

Please enter evaluee's personal data:

Name:
Street Address:
Appartment:
City:
Street:
Zip Code:
Phone Number:

SSN:
Age:
Sex:

School/Employer:
Grade/Profession:

Press <RETURN> when done with each item

---

12. Simply type in required information and press return when finished with each item.

13. When finished, computer will ask, "Is this information correct? (Y or N)."

14. Type Y if information is correct and N if you wish to change anything.

15. When you type Y, your next screen will look like this:

Chose vocation(s) for scoring

Agriculture Business and Office
Cosmetology Construction

etc.

Press <SPACE> to select / deselect vocations
Use arrows to move to vocations
Press <RETURN> to accept indicated vocations
Pressing <RETURN> with no vocations selected will select all vocations

---

16. If you wish to modify titles of existing vocations go to line 39, in this outline.

17. Follow prompts at the bottom of the screen for selecting, deselecting and accepting vocations. After selecting the vocations you wish to use, your next screen will look like this:

Student Evaluation

Cler./Verbal	Motor Coord.	Cler./Num.	Finger Dext.	Man Dext.

etc.

---

18. At this point you would enter student's scores from the PREVOCATIONAL ASSESSMENT SCREEN which are based on the following scale:

1 = Superior

2 = Above Average

3 = Average

4 = Below Average

5 = Needs Improvement

5

Simply type in student's rating under each performance. You may edit mistakes by using your left and right arrow keys and re-entering the correct rating.

19. When you have finished entering data, type Y.

20. Your next screen will look like this:

How do you want your results displayed?

1: On your printer

2: On your screen only

---

21. Type in desired option.

22. If you type 1, you will get a printout for each vocational area you select, see page (13).

23. If you type 2, your next screen will look like this:

Please wait.....

Vocation: Agriculture
Score interpretation 1 = high correlation
5 = low correlation

Trait	Importance	Evaluee's raw score	Evaluee's wtd. score
Motor Coodination			
Clerical Numerical			
Finger Dexterity			
Manual Dexterity			

etc.

Please press <SPACE> to continue

(Only traits with a rating of 3 or higher will be listed for correlation purposes.)

Press space bar to advance through selected vocations.

24. If you wish to enter another student, type Y. (N will take you back to the main menu.)

EDITING AND CREATING MATRICES

25. If you wish to edit an already existing matrix or create an entirely new matrix, type 2 in the MAIN MENU.

26. Your next screen will look like this:

```
-------------------------------------------------------
        Available Evaluation Matrices:
        DOL
        Please type a name for this matrix
           -->
-------------------------------------------------------
```

27. Type in the name of the Matrix listed under "Available Evaluation Matrices" that you wish to edit and press return: OR

28. If you wish to set up a new matrix, type in the name you wish to call the new matrix and press return. Skip to line 31.

29. If you are going to edit an existing matrix, your next screen will look like this:

```
-------------------------------------------------------
          (NAME) is a previously defined matrix
          Do you wish to edit (NAME)
-------------------------------------------------------
```

30. Type Y. Your next screen will look like this:

```
------------------------------------------------------
Would you like to edit all or some of this matrix? ( A/S )
------------------------------------------------------
```

31. At this point you may edit all or some of the vocational areas on the matrix. Type (A) All or (S) Some.

32. If you type S, your next screen will look like this:

(If you type A skip to line 37.)

```
------------------------------------------------------
            Choose vocation(s) for editing.

    Agriculture              Business and Office
    Cosmetology              Construction
    Drafting                 Electro-Mech

                etc.

     Press <SPACE> to select / deselect vocations
           Use arrows to move to vocations
     Press <RETURN> to accept indicated vocations
Pressing <RETURN> with no vocations selected will select all
                    vocations
------------------------------------------------------
```

33. Select vocations you wish to edit. Follow prompts at the bottom of the screen to select, deselect and accept vocations. Your next screen will look like this:

```
------------------------------------------------------
                Student Evaluation

|             |              |              |             |              |
|Cler/Verbal |Motor Coord.| Cler./Num. |Finger Dext.| Man. Dext. |
-------------------------------------------------------------------------
|             |              |              |             |              |
|             |              |              |             |              |
                    etc.
------------------------------------------------------
```

34. Enter new values under each performance. The values are based on the following scale:

1 = CRITICALLY SIGNIFICANT

2 = ABOVE AVERAGE SIGNIFICANCE

3 = AVERAGE SIGNIFICANCE

4 = BELOW AVERAGE SIGNIFICANCE

5 = NO SIGNIFICANCE

When you are finished, type Y.

35. When all matrices are complete, the computer will ask "Are all of the above entries correct? Y/N". Type Y. The next screen will say "Is all matrix information correct? Y/N". Type Y. The next screen will say "Do you wish to save this matrix? Y/N". Typing Y will save the new matrix and erase the old one. Type Y.

36. The next screen will ask "Would you like to edit another matrix?". If you type Y, repeat the same process from 25 in this outline. If you type N you will to back to the MAIN MENU screen.

37. (From line 32) If you type (A) All, you must re-enter values in all of the vocational matrices. When you type (A), all of the matrices will appear in order as you enter values. You may use <ESC> and <TAB> keys to move backward and forward, respectively, through the various matrices.

DELETING A MATRIX

38. Finally, if you wish to delete a matrix type 3 then type in

the number beside the name of the matrix you wish to delete then press return. Type Y to delete matrix. Type O to go back to MAIN MENU when finished.

EDITING VOCATIONAL TITLES

39. WARNING: If you edit the existing Voc. titles, all existing matrices will be invalid. Therefore if you wish to prerserve the existing matrices, make a copy of your original disk and only make changes on your copy. Before you edit the vocational title you must delete all existing matrices. (See line 38.) After the new vocational titles have been entered you must re-enter ratings under the EDITING AND CREATING NEW MATRICES function. (See line 25.) If you wish to re-enter your DOL MATRIX go to page (14) for DOL ratings.

40. To edit Voc. titles:

41. Type 4 in the MAIN MENU

42. Your nest screen will look like this:

Agriculture	Business & Office
Construction	Cosmetology
Drafting	Electro-Mechanical

etc.

Use arrows to highlight vocation titles
Press <CONTROL-D> to delete vocation titles highlighted
Press <CONTROL-E> to edit vocation titles highlighted
Press <RETURN. to save changes to vocation titles

---

43. Use your arrow keys to highlight the title you wish to edit

or delete.

44. Press CONTROL-D at the same time to delete a title.

45. Press CONTROL-E at the same time to edit a title.

46. If you press CONNTROL-E your next screen will look like this:

Agriculture	Business & Office
Construction	Cosmetology
Drafting	Electro-Mechanical

etc.

Current vocation title: (Name)
New Vocation title:
Vocation title may not exceed 20 characters

---

47. Type in new title. (The first letter of the new title must be capitalized.) Then press return.

48. Type Y if it is correct, then press return.

49. You must now press return to save changes to vocational titles. This must be done after EACH addition or deletion.

50. The computer will then say " do you wish to save the change(s) you made to vocational titles? Y/N". Type Y.

51. The progam will then enter the revision, alphabetize your entry and return you automatically to the MAIN MENU. Press 4 to view changes and make additional revisions.

52. If you wish to add to your vocational title list use your arrow keys to select an available blank vocation. The Program will only accept and save one entry at a time, therefore the

arrow key will only select one of the blank vocations. For example, the first blank vocation the program will accept is located under Transportation. The next available blank vocation will always be alphabetically sequenced across from or under the last vocational title listed.

53. Go back to line 46 and proceed with directions.

Vocational Performance Matrix
12-3-85

JOHNNY FUTURE
LD LANE, APT. BD
ENIGMA, GA 30303
303-3030

SSN: 303-30303
Age: 14
Sex: MALE

School/Place of work: HIGH HOPE VOC HIGH
Grade/Profession: 9

Vocation: Graphic Arts
Score interpretation: 1 = high correlation
5 = low correlation

Trait	Importance	Evaluee's Raw Score	Evaluee's Wtd Score
Motor Coordination	2	3	2.4
Clerical/Numerical	3	4	2.4
Finger Dexterity	3	1	0.6
Manual Dexterity	2	1	0.8
Form Perception	1	3	3.0
Spatial Perception	2	3	2.4
Color Discrimination	2	2	1.6
Clerical/Verbal	2	5	4.0

MATRIX
FOR
CORRELLATING APTITUDES TO VOCATIONAL TRAINING PROGRAMS

(The following data is based on our research and may or may not reflect the ratings in your specific training areas.)

	AGRICULTURE	AUTO BODY	AUTO MECHANICS	CHILD CARE	CLOTHING	COSMETOLOGY	CONSTRUCTION	DRAFTING	ELECTRONICS	ELECTRO-MECH.	FOOD SERVICE	GRAPHIC ARTS	HEALTH OCCUP.	HORTICULTURE	MACHINE SHOP	MARKETING	OFFICE OCCUP.	WELDING	WOOD WORKING	STUDENT RATING		
CLERICAL VERBAL	4	4	4	3	3	4	4	2	3	3	3	2	2	4	4	1	1	4	4			
MOTOR COORDINATION	3	2	1	3	2	1	2	2	2	2	3	3	3	3	1	4	2	1	2			
CLERICAL NUMERICAL	4	4	4	3	3	4	4	2	2	3	3	2	2	4	4	1	1	4	4			
FINGER DEXTERITY	3	2	1	3	1	2	2	1	1	1	3	2	2	3	2	4	3	2	2			
MANUAL DEXTERITY	2	1	1	3	2	2	2	2	2	1	2	3	2	2	1	4	4	1	2			
FORM PERCEPTION	3	1	1	3	1	2	2	1	1	1	3	1	2	3	1	2	3	1	2			
SPATIAL PERCEPTION	4	3	2	3	2	2	2	1	1	2	3	2	2	4	2	4	4	2	2			
COLOR PERCEPTION	3	3	3	3	2	2	4	3	2	2	3	1	3	3	3	4	4	3	4			

Directions: Using the following scale, have each instructor rate under their course area the importance of the aptitudes listed in the left hand column of the matrix.

1 — CRITICALLY SIGNIFICANT

2 — ABOVE AVERAGE SIGNIFICANCE

3— AVERAGE SIGNIFICANCE

4 — BELOW AVERAGE SIGNIFICANCE

5 — NO SIGNIFICANCE

Give instructor a set of the Definition of Terms (page 5) when they are rating aptitudes so they understand exactly what each term means. It may be necessary to modify an instructor's rating if results prove unrealistic. Refer to the HANDBOOK FOR ANALYZING JOBS published by the Department of Labor for information concerning aptitude patterns in jobs.

An evaluee rating based upon scores found on your Reporting Form or computer print-out should be entered in the right hand column under "Student Rating".

Now you can compare instructor ratings with evaluee's scores. If a student or evaluee scores 4 or 5 on a particular aptitude and an instructor has rated the aptitude as critically important in their curriculum, remidiation or alternative courses should be considered. On the other hand, if an evaluee scores average or better in areas rated as a 1, 2 or 3 by the instructor, it is an indication that the evaluee has the necessary aptitude to perform effectively in that vocational program.